

WHAT IS CLAIMED IS:

1 1. A method for providing a uniform oxide layer over a
2 metal layer in a semiconductor device, said method comprising the
3 steps of:

4 placing a layer of boron doped oxide over said metal layer;

5 placing a layer of phosphorus doped oxide over said layer of
6 boron doped oxide;

7 calculating a time period required for a wet etch process to
8 etch through said layer of phosphorus doped oxide; and

9 performing said wet etch process on said phosphorus doped
10 oxide layer for said time period.

1 2. The method as set forth in Claim 1 wherein said metal
2 layer in said semiconductor device is a metal link layer of a
3 laser trimmed fuse.

1 3. The method as set forth in Claim 1 wherein said step of
2 placing said layer of boron doped oxide over said metal layer
3 comprises the step of:

4 forming said boron doped oxide layer with a desired
5 thickness.

1 4. The method as set forth in Claim 3 wherein said desired
2 thickness of said boron doped oxide layer is approximately five
3 thousand Angstroms.

1 5. The method as set forth in Claim 1 wherein said step of
2 calculating said time period required for said wet etch process
3 to etch through said layer of phosphorus doped oxide comprises
4 the step of:

5 dividing a thickness of said phosphorus doped oxide layer by
6 a value of an etch rate of said wet etch process through said
7 phosphorus doped oxide layer.

1 6. The method as set forth in Claim 1 wherein said step of
2 placing said layer of phosphorus doped oxide over said layer of
3 boron doped oxide comprises the step of:

4 forming said phosphorus doped oxide layer with a desired
5 thickness.

1 7. The method as set forth in Claim 6 wherein said desired
2 thickness of said phosphorus doped oxide layer is approximately
3 five thousand Angstroms.

1 8. The method as set forth in Claim 1 further comprising
2 the step of:

3 performing said wet etch process on said boron doped oxide
4 layer after said wet etch process has etched through said
5 phosphorus doped oxide layer; and

6 stopping said wet etch process after said wet etch process
7 has begun to etch said boron doped oxide layer.

1 9. The method as set forth in claim 1 further comprising
2 the steps of:

3 calculating a length of time required for said wet etch
4 process to etch down to a desired thickness of said layer of
5 boron doped oxide; and

6 performing said wet etch process on said boron doped oxide
7 layer for said length of time after said wet etch process has
8 etched through said phosphorus doped oxide layer.

1 10. The method as set forth in Claim 9 wherein said desired
2 thickness of said boron doped oxide layer is approximately five
3 thousand Ångstroms.

1 11. An apparatus for providing a uniform oxide layer over a
2 metal layer in a semiconductor device, said apparatus comprising:
3 a semiconductor device comprising a metal layer;
4 a layer of boron doped oxide placed over said metal layer;
5 and
6 a layer of phosphorus doped oxide placed over said layer of
7 boron doped oxide.

1 12. The apparatus as set forth in Claim 11 wherein said
2 metal layer in said semiconductor device is a metal link layer of
3 a laser trimmed fuse.

1 13. The apparatus as set forth in Claim 11 wherein said
2 layer of boron doped oxide is formed having a desired thickness.

1 14. The apparatus as set forth in Claim 13 wherein said
2 desired thickness of said boron doped oxide is approximately five
3 thousand Angstroms.

1 15. The apparatus as set forth in Claim 11, wherein said
2 layer of phosphorus doped oxide placed over said layer of
3 phosphorus doped oxide is etched through down to said layer of
4 boron doped oxide.

1 16. The apparatus as set forth in Claim 11 wherein said
2 layer of phosphorus doped oxide is formed having a desired
3 thickness.

1 17. The apparatus as set forth in Claim 16 wherein said
2 desired thickness of said phosphorus doped oxide is approximately
3 five thousand Angstroms.

1 18. An apparatus for providing a uniform oxide layer over a
2 metal layer in a semiconductor device, said apparatus comprising:
3 a semiconductor device comprising a metal layer;
4 a layer of a first doped oxide placed over said metal layer
5 wherein said layer of said first doped oxide has a slow etch
6 rate; and
7 a layer of a second doped oxide placed over said layer of
8 said first doped oxide wherein said layer of said second doped
9 oxide has a fast etch rate.

1 19. The apparatus as set forth in Claim 18 wherein said
2 layer of said second doped oxide placed over said layer of said
3 first doped oxide is etched through down to said layer of said
4 first doped oxide.

1 20. The apparatus as set forth in Claim 19 wherein a
2 thickness of said layer of said first doped oxide is
3 approximately five thousand Ångstroms.

1 21. A method for providing a uniform oxide layer over a
2 metal layer in a semiconductor device, said method comprising the
3 steps of:

4 placing a layer of a first doped oxide over said metal layer
5 wherein said first doped oxide has a slow etch rate;

6 placing a layer of a second doped oxide over said layer of
7 said first doped oxide wherein said second doped oxide has a fast
8 etch rate;

9 calculating a time period required for a wet etch process to
10 etch through said layer of said second doped oxide; and

11 performing said wet etch process on said layer of said
12 second doped oxide for said time period.

1 22. The method as set forth in Claim 21 wherein said metal
2 layer in said semiconductor device is a metal link layer of a
3 laser trimmed fuse.

1 23. The method as set forth in Claim 21 wherein said step
2 of placing said layer of said first doped oxide over said metal
3 layer comprises the step of:

4 forming said layer of said first doped oxide with a desired
5 thickness.

1 24. The method as set forth in Claim 23 wherein said
2 desired thickness of said layer of said first doped oxide is
3 approximately five thousand Angstroms.

1 25. The method as set forth in Claim 21 wherein said step
2 of calculating said time period required for said wet etch
3 process to etch through said layer of said second doped oxide
4 comprises the step of:

5 dividing a thickness of said layer of said second doped
6 oxide by a value of an etch rate of said wet etch process through
7 said second doped oxide layer.